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Robert G. Splawn, M.D.
Interim Chief Medical Officer

June 12, 2009

TO: Each Supervisor

FROM: John F. Schunhoff, Ph.D. 
Interim Director

SUBJECT: **REQUEST TO EXECUTE ONE NEW ITSSMA WORK
ORDER FOR A SENIOR DATABASE ARCHITECT
AND A SENIOR APPLICATION DEVELOPER FOR
THE CLINICAL RESOURCE MANAGEMENT (CRM)
PROGRAM IMPLEMENTATION**

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This is to advise you of my intent to request Internal Services Department (ISD) to execute one new Work Order for two Consultants. The Senior Database Architect Consultant with Kernel Ware Technology, Inc. is at the rate of \$147.00 per hour for approximately 1,063 hours totaling \$156,261. The Senior Application Developer Consultant is at the rate of \$68.00 per hour for approximately 2,108 hours totaling \$143,344. These two new consultants will continue the CRM program implementation under the Information Technology Support Services Master Agreement (ITSSMA) managed by ISD. The maximum amount of this new Work Order will not exceed \$299,605.

BACKGROUND

*To improve health
through leadership,
service and education.*

The above Work Order was posted on October 22, 2008 and closed on November 6, 2008. After the interview process was completed, it was found that only one vendor met the requirements.

The CRM Program leads the DHS Clinical Transformation efforts. CRM provides new, structured care methods for health care delivery. This is designed to optimize both clinical decision-making and resource consumption.

The development, implementation and maintenance of the CRM Database System are critical to support the existing and future CRM Countywide initiatives, and are critical to the success of the CRM program. CRM is in the process of consolidating multiple systems into a consolidated CRM Database System. This will result in a centralized database model and will provide better support to allow more agile development processes. The CRM Database System will optimize solo systems and merge all solo development into a scalable, expandable, CRM-enterprise level database architecture.



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Program	Value to Los Angeles County – DHS
Coverage Initiative (Healthy Way LA) Protocols	The Coverage Initiative (CI) provides up to 167 million dollars of funding to DHS over three years. One deliverable in the CI is the use of clinical protocols at the point of care. The CRM program is responsible for this deliverable and requires automated tools to achieve the goal. This Work Order supports that goal.
Automated Medication Reconciliation	Medication reconciliation is a Joint Commission requirement that had not been met successfully at most of our facilities at the time of their survey. The CRM group has developed a successful, fully automated pilot in the Emergency Department at Olive-View UCLA Medical Center. We desire to roll this solution out throughout DHS.
Disease Management Registry (DMR)	Eighty percent of medical costs are generated by the 20% of patients with important chronic illness. The CRM program has a chronic care program that has been nationally recognized. The centerpiece of the program is an electronic tool that is focused on the continuum of care, rather than acute care which is the focus for the commercial hospital information system.
Inpatient Clinical Pathways (ICP)	One of three deliverables for the Medicaid 1115 Waiver was the institution of Inpatient Pathways. These diagnosis-specific, pre-planned order and nursing documentation tools are a critical component to error reduction and clinical improvement strategies for DHS. In addition, they have reduced Inpatient Length of Stay by thousands of days, resulting in millions of dollars in savings.
Advanced Triage and Emergency Medicine Management (ATEMM)	The first real-time clinical care system used in DHS, the ATEMM system, has improved patient flow, automated the diagnosis coding process and allowed for the testing of automated medication reconciliation.

The projects listed above began development and implementation at different times. Thus, they do not share the same database infrastructure. CRM's goal is to consolidate all the development efforts into one scalable enterprise level database system in order to share the data artifacts across the projects, centralize the database, and more importantly, create the fundamental infrastructure for existing and future CRM system development.

Prior Work Order History for Work Orders: N04-0333, N04-0341, N04-0342, N04-364

In May 2003, a team of consultants was selected from MODIS, Inc., through the ITSSMA competitive bidding process to work on CRM applications. Work Order Nos. N04-0333, N04-0341, and N04-0342 were executed for \$293,900.

In July 2003, the consultant filling Work Order N04-0333 left the position. This position had remained unfilled despite attempts by MODIS, Inc. to find a suitable replacement and as a result this work order was terminated. In September 2003, DHS used a competitive ITSSMA bid in order to seek a replacement database administrator for this position with the same qualifications and similar level of expertise as was specified under the original work order. In November 2003, Work Order N04-0364 with MODIS, Inc. was executed for \$60,000.

In June 2004, Work Order No. N04-0341 was extended to August 31, 2004 and 100 hours were added. In July 2004, Work Order No. N04-0342 was extended to August 31, 2004.

In August 2004, Work Order No. N04-0341, N04-0342, and N04-0364 were extended to September 30, 2005. The Board was notified and approved the extensions. These work orders were executed for \$397,050.00, and brought the grand total to \$690,950.00. For these work orders, additional time was required to process the full 12-month extension request.

In September 2005, Work Order No. N04-0341, N04-0342 and N04-0364 were extended to September 30, 2006. The Board was notified and approved the extensions. These work orders were executed for \$342,680, and brought the grand total to \$1,033,630.

In September 2006, Work Order No. N04-0341 was extended to January 31, 2007, Work Order No. N04-0342 was extended to March 30, 2007. The Board was notified and approved the extensions.

In April 2007, Work Order No. N04-0364 was extended to September 14, 2008. The Board was notified and approved the extension.

Work Order	Vendor	Term of Contract	Total Allocation	Expended Amount
N04-0333	Modis	06/03/03 – 07/09/03	\$60,000	\$6,000.00
N04-0341	Modis	06/03/03 – 01/31/07	\$482,580	\$404,409.00
N04-0342	Modis	06/04/03 – 03/30/07	\$241,450	\$159,659.50
N04-0364	Modis	11/05/03 – 09/14/08	\$464,600	\$449,070.00
Work Order Totals				\$1,019,138.50

Original Scope of Work for Work Orders: N04-0333, N04-0341, N04-0342, N04-364

The original scope of work was a team of consultants including a Database Administrator (DBA), a Senior Programmer and a Junior Programmer. Their duties include:

- Migrating the CRM application architecture to Microsoft.net technology;
- Converting the current database schema, tables and program code to Microsoft SQL technology;
- Designing, developing, testing, implementing and deploying critical components of new applications in the new platforms; and
- Providing knowledge transfer to CRM ITG staff to continuously develop and maintain the CRM system.

SCOPE OF WORK FOR WORK ORDER 03-2224

The scope of work is a team of consultants including Senior Database Architect and Senior Application Developer consolidating multiple systems into a single consolidated CRM Database System, and merging all solo development into a scalable, expandable, CRM-enterprise level database architecture. The job duties include:

Senior Database Architect

- Oversee database system infrastructure;
- Review and modify existing DHS-CRM database and systems to better integrate with each other;
- Design and implement the enterprise-level business intelligence layer for all the DHS-CRM projects;
- Perform detail design on the data specifications so that the physical data model supports the business rules and data normalization;
- Update the data dictionary to reflect the implemented DHS-CRM applications artifacts (i.e., database schema, data descriptions, sizing, keys, interfaces etc);
- Develop and coordinate with the appropriate personnel on data recovery and backup procedures for the DHS-CRM database;
- Configure database backups and restore the recovery as necessary;
- Backup/restore Production, Training and Development databases to ensure consistency across environments and;
- Immediately fix any database system related problems resulting from a failure, and modify/improve the failed process to ensure future reliability.

Senior Application Developer

- Transform the business logic in the DHS-CRM database application and database reports to the feature specification document;
- Write stored procedures based on the feature specification document to incorporate the business logic into the database layer and;
- Build a business intelligence layer under the instructions for Senior Database Architect.

JUSTIFICATION

The development of the existing and future CRM Clinical Systems is an ongoing process, and a critical part of the DHS deliverables. CRM IT staff has all the expertise from Software Architecture Design, and Software Project Management to Software Engineering to build quality systems for DHS. However, to ensure all the CRM Systems continue to succeed, CRM needs a qualified person to lead the Database Architecture Design, a skill set lacking in current staff. This is a temporary need. Once the consolidation is complete, CRM will have an enterprise level database system that should fulfill future development for the next eight to ten years.

There are no County employees with the expertise or skills needed to perform the technical programming and database administration needed to develop and implement the necessary DHS-CRM applications.

TERM

The period of performance of this engagement will be upon the execution of the work order and will continue for a maximum of 12 months and during that time DHS will prepare its own Board Contract for any work extending past 12 months.

FISCAL IMPACT

DHS CRM has included this funding in its FY 2008-09 and 2009-10 Information Technology operating budgets.

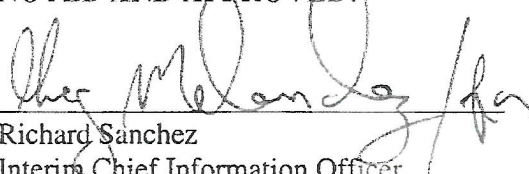
NOTIFICATION TIMELINE

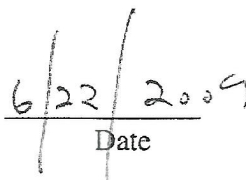
If no objection is received from your Board by July 9, 2009, we will instruct ISD to proceed with the amendment of this Work Order. If you have any questions or need additional information, please let me know or your staff may contact Ellen Marie Gail, Clinical Resource Management, at (818) 364-3272.

JFS:gc

c: Chief Executive Officer
Acting County Counsel
Executive Officer, Board of Supervisors
Director, Internal Services Department

NOTED AND APPROVED:


Richard Sanchez
Interim Chief Information Officer


Date